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# FOREIGN CROPS AND MARKETS.

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Feature of Issue: COTTON IN PERU.

## UNFAVORABLE CROP WEATHER IN EUROPE

Rain and floods in western and central Europe during December destroyed the snow cover and exposed crops to possible frost damage. Reports indicate that crops in the Netherlands suffered more than in other countries from water damage. Severe frost damage to citrus fruit is reported from Spain. See pages 40 and 45.

## CURRENT MARKET CONDITIONS

Foreign butter markets showed further weakness during the week of January 8, but New York prices also fell sharply. Practically no variations appeared in the German pork market, but British bacon prices continued the decline of the past 3 weeks. Apple prices at Liverpool were lower, with a generally slow demand. See pages 44, 45, 65 and 69.

## INCREASED COTTON PRODUCTION IN PERU

Cotton production in Peru increased by 87 per cent from 1914-19 to 1924-25. Areas show an increase of 75 per cent. Further increases depend largely upon the amount of capital available for the extension of irrigation projects. See pages 47 and 53.

## C R O P P R O S P E C T S

Crop Conditions in Argentina

Temperatures in the northern grain zones of Argentina were slightly below normal and the precipitation was a little more than one-half the usual amount, according to cabled information received by the United States Weather Bureau.

European Weather and Crop Conditions

December weather throughout Europe was characterized by severe storms and widely fluctuating temperature according to a cable from H. C. Smith, special representative of the Department of Commerce in London. Early in the month the temperature was cold with a good snow cover but in the latter half of the month a rising temperature was accompanied by torrential rains, high winds and floods which have continued into January. Considerable flood damage to winter crops is reported from the Netherlands but little damage is likely in other countries where the lowlands are more generally used for pasture. Winter crops in Northern and Central Europe would be greatly damaged now if heavy frost should follow the present warm weather. In France some unthreshed stacks of grain have been damaged by the rains.

Good 1925 Crops in Denmark

The final crop estimates of Denmark for 1925 are considerably above the production in 1924. Estimates of production with comparisons for last year are as follows: wheat, 3,818,000 bushels against 5,864,000; rye, 13,779,000 against 10,433,000; barley, 34,906,000 against 34,219,000; oats, 67,516,000 against 63,208,000; potatoes, 52,176,000 against 27,271,000; sugar beets, 1,301,000 short tons against 1,051,000 short tons.

Estimates of cereal production received to date including the new Danish figures given above and revised estimates of German crops are summarized in the following table:

## CEREAL CROPS: Production 1924 and 1925

Crop and Country	1924	1925	Decrease: from 1924	Increase over 1924
	1,000 bushels	1,000 bushels	Per cent	Per cent
WHEAT	1,000 bushels	1,000 bushels		
Total, 37 countries.....	3,012,468	3,270,667		8.6
World total excl. Russia:	3,091,000			
RYE				
Total 25 countries.....	723,229	1,000,888		38.4
World total excl. Russia:	728,000			

Continued -

## CROP PROSPECTS, CONT'D.

## CEREAL CROPS: Production, 1924 and 1925, Cont'd.

Crop and Country	1924	1925	Decrease from 1924	Increase over 1924
	: 1,000 bushels	: 1,000 bushels	: Per cent	: Per cent
BARLEY	: 1,000 bushels	: 1,000 bushels	:	:
Total 34 countries.....	1,441,060	1,243,435	:	19.4
World total excl. Russia....	1,202,000	:	:	
OATS	:	:	:	:
Total 31 countries.....	3,565,124	3,840,557	:	7.7
World total excl. Russia....	3,702,000	:	:	
CORN	:	:	:	:
Total 14 countries.....	2,812,249	3,436,802	:	22.2

Official sources and International Institute of Agriculture.

## COTTON

In Brazil during the last ten days of November, the weather was dry in the northern states but rainy in the central and southern states except in Bahia, according to Vice Consul Dawson at Rio de Janeiro quoting the Ministry of Agriculture. Picking is being completed from Maranhao to Bahia with sub-normal results. The soil is being prepared for planting in the North.

## COTTON: Area and production 1924-25 and 1925-26

Country	1924-25	1925-26	Decrease from 1924-25	Increase over 1924-25
	: 1,000 acres	: 1,000 acres	: Per cent	: Per cent
AREA	: 1,000 acres	: 1,000 acres	: Per cent	: Per cent
Regions previously reporting and unchanged a/.....	70,688	77,399	:	9.4
Estimated world total.....	79,500	:	:	
PRODUCTION	: 1,000 bales	: 1,000 bales	:	:
	: 478 pounds	: 478 pounds	:	:
Regions previously reporting and unchanged b/.....	23,220	25,302	:	9.0
Estimated world total.....	24,700	:	:	

Compiled from official sources and the International Institute of Agriculture except as otherwise stated. a/ Includes United States, Laguna and Lower California (Mexico), Russia, Chosen, Egypt, Gezira (Anglo-Egyptian Sudan), Italy, Oran, District of Algeria, Bulgaria, Syria, Uganda and India. b/ Includes United States, India, Egypt, China, Russia, Chosen, Laguna and Lower California (Mexico), Bulgaria and Anglo-Egyptian Sudan.

## CROP PROSPECTS, CONT'D.

Progress of Cotton in Mozambique.

In the district of Lourenco Marques, lying in the southern part of Mozambique, Portuguese East Africa, cotton growing has expanded rapidly in the past three years, states Consul Gourley, quoting official reports. In 1922-23 there were only 8 farmers and estates cultivating cotton, while in 1924-25 the number had increased to 195. The production for 1922-23 was 78 bales of 478 lbs. from an area of 131 acres compared with 713 bales from 4,470 acres in 1923-24. No estimate of production has been made for 1924-25 but estimates of acreage indicate an increase of over seven times the area cultivated in 1923-24. The crop for the past season however, has been a failure. Floods and heavy rains, as well as insect pests, have caused great damage to the crop. Unofficial estimates place the production at 5,000 bales for all Mozambique compared with 10,000 bales in 1923-24.

Correction

On page 953 of the issue dated December 28, 1925, there appears the statement: "Preliminary estimates of lint cotton production received from all countries reporting to date, including the United States, indicate a total of 252,298,000 bales of 478 pounds net . . ." A glance at the table on the same page will show that the figure should read 25,298,000 bales.

## OILSEEDS

The first estimate of the area sown to linseed in India for the 1925-26 season is 2,768,000 acres. Last year the first estimate was 2,845,000 acres and the final estimate 3,695,000 acres. Although the first estimate for the 1925-26 crop is 2.7 per cent below the first estimate of last season, it is above all other first estimates for the last ten years with the exception of 1917-18 when the preliminary estimate amounted to 2,827,000 acres. The first estimates during the last 10 years have averaged approximately 70 per cent of the final acreage figures except in 1918-19 season when the final figure was 2 per cent below the first forecast.

The rapeseed and mustard area is estimated to be 3,366,000 acres compared with a first estimate of 3,528,000 acres last season when the final acreage amounted to 6,376,000 acres. The first estimates for the past three seasons have averaged between 55 and 58 per cent of the final acreage figures.

## C R O P P R O S P E C T S, C O N T ' D.

## SUGAR

The Hawaiian sugar crop of 775,000 short tons, for the season just completed, was all sold out before the end of November, according to a cable to the Bureau of Foreign and Domestic Commerce from the Chamber of Commerce at Honolulu.

Weather conditions in Porto Rico continue favorable for the sugar crop according to a cable of December 26, 1925 to the Bureau of Foreign and Domestic Commerce from E. P. Keeler Secretary to the American Trade Commissioner at San Juan.

Licht has again reduced his estimate of the European beet sugar crop. The total crop is now placed at 8,247,000 short tons as compared with his November estimate of 8,305,000 and his September estimate of 8,393,000 short tons. Revisions occur in the following countries:

Country	1924-25		1925-26 estimates		
	final estimate		Sept. 30	Nov. 28	Dec. 30
	Short tons	Short tons	Short tons	Short tons	Short tons
Germany.....	1,736,876		1,852,000	1,852,000	1,797,000
France.....	912,723		860,000	816,000	827,000
Belgium.....	441,035		419,000	397,000	386,000
All other countries..	4,711,815		5,252,000	5,228,000	5,237,000
Total Europe.....	7,801,649		8,383,000	8,303,000	8,247,000

SUGAR; Production of cane and beet sugar in countries reporting for 1925-26

Country	1924-25		Decrease : Increase		
	1925-26		from	over	
	1924-25	1924-25	1924-25	1924-25	1924-25
BEET SUGAR	Short tons	Short tons	Per cent	Per cent	
Total, 11 European countries and United States previously reported.....	6,560,385	6,351,613			4.4
Estimated world total beet sugar.....	8,894,194				
CANE SUGAR					
Total, 10 countries previously reported.....	10,373,102	11,254,804			8.5
Estimated world total cane sugar.....	17,256,565				

Official sources and International Institute of Agriculture unless otherwise stated.

## L I V E S T O C K, M E A T A N D W O O L

Cattle and Beef

CATTLE IN NEW ZEALAND: Severe weather has had a rather unfavorable effect on New Zealand cattle, according to Vice Consul Hudson of Wellington. There was ---- an actual scarcity of feed last winter and for the first time in some years old stocks have been cleaned up entirely. New Zealand farmers are so accustomed to open winters that little, if any, weather protection is provided except trees as windbreaks. As many farmers expect a continuation of unfavorable winters for a few years they are now providing more shelter and feed storage.

MEAT STOCKS SMALLER IN CANADA: Supplies of beef and other meats in cold storage in Canada on December 1, 1925 were smaller than they were last year at the same date and also less than the average supplies on hand December 1 for the five preceding years. See page 66.

Hogs and Pork

PORK PRODUCTION IN NEW ZEALAND: The backward season seems to have affected pig production very little as the sales yards are full states Vice Consul Hudson of Wellington. New Zealand frozen pork has been reaching English markets for some time in sufficient quantities for the merchants to judge quality and demand and the result has been very favorable. Requests are being received for greater quantities.

GERMAN PORK MARKET STEADY: Practically no variations in German hog and lard prices for the week of January 7 are noted by W. A. Schoenfeld, Berlin representative of the Department of Agriculture. Receipts of hogs were considerably heavier than for the preceding week. See page 69.

FURTHER DECLINE IN BRITISH BACON PRICES: Bacon in British markets registered a further decline for the week of January 6, according to E. A. Foley, American Agricultural Commissioner at London. The lower tendency has been apparent for the last three weeks. Hog receipts last week were heavier than for the two preceding weeks. See page 69.

Sheep and Wool

FRENCH WOOLEN INDUSTRY ACTIVE: The large quantity of wool which passed through the test houses at Roubaix Tourcoing in October 1925 exceeded by approximately 4,500,000 pounds the monthly average for 1913, states Consul F. C. Squire at Lille. Purchases of wool abroad during September were also heavy, having equalled the large quantities bought in September, 1923. The further depreciation of the French franc has served to favor exportation. Shipments since 1924 having largely exceeded those before the war. See page 65 for detailed figures.

## EUROPEAN BUTTER DECLINES LESS THAN NEW YORK

Further declines in the prices of butter in Copenhagen, Berlin and London during the week ended January 8, were more than equalled by the decline in New York. According to American agricultural commissioners abroad, Danish in Copenhagen at the equivalent of 34.4 cents was two cents and London prices generally less than a cent below last week against a three cent decline on 92 score butter in New York. The recent very heavy drop in price in Berlin was sustained, the quotation on best domestic butter reaching 31.3 cents or fully two cents lower than a week earlier. The German butter market has been affected recently by lessened demand for the foreign product, while in the British markets the dominant influence is still the heavy shipments at hand together with indefinite quantities of old butter that had not been disposed of when the accumulated Colonial supplies became available. See page 69.

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## F R U I T

LIVERPOOL, APPLE PRICES LOWER, DEMAND MOSTLY SLOW: Prices realized for both boxed and barreled apples at the Liverpool auction on January 6 were generally lower than those prevailing before the holidays. A typically slow first-of-the-year demand for most varieties together with considerable quantities of fruit in poor condition, especially Nova Scotians, are depressing factors, according to information cabled by Edwin Smith, the Department's fruit specialist in Europe. The demand for Yorks and Greenings is good, however, and prices of Yellow Newtons are being affected by the short supply. Ample supplies of red varieties are now on the market, and many Jonathans and Spizenburgs are in weak condition. The market for pears has been very unfavorable since the middle of December, with much fruit arriving in bad condition. See page 68.

SPANISH ORANGES DAMAGED BY FROST: The orange crop in the whole producing district around Valencia, Spain, with the exception of a few spots, was severely injured by frosts during the latter part of December according to a cable to the Department of Agriculture from Consul Edwards at Valencia. Comments in the newspapers and agricultural reviews place the damage at from 40 to 80 per cent of the crop, the indications being that the lower figure most accurately represents the situation. Seventy-five to eighty-five per cent of the total Spanish orange crop is produced in this region.

Up to the time of the freeze the crop this year promised to be an exceptionally large one, far above that of last year when something over eleven million crates were exported from the Provinces of Valencia and Castellon. Consul Edwards states that a little more than three million crates have been exported so far this year, and that shippers are of the opinion that it may be possible to approach last year's exports if no further adverse conditions are experienced.

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## SUMMARY OF LEADING ARTICLE

## INCREASED COTTON PRODUCTION IN PERU

Cotton production in Peru has increased from 110,000 bales of 478 pounds in 1914-19 to 206,000 bales in 1924-25, according to the International Institute of Agriculture. Area figures compiled by the same agency indicate an increase from the average of 163,000 acres in 1914-19 to 286,000 acres in 1923-24. On the basis of these figures, however, the yield per acre fell to 344 pounds of ginned cotton in 1923-24 against 373 pounds for the average of 1915-19. Figures for those years appear on page 56 and are compiled from official sources.

Further expansion in Peruvian cotton production appears to be limited largely by the amount of water available for irrigation. In an appeal to British investors for capital to develop cotton production (February 27, 1925), the Peruvian Consul General in London estimated the potential production at 18,000,000 bales in coastal areas suited to cotton. Irrespect-ive of the validity of that estimate, it is an historical fact that the coastal valleys of Peru are capable of much heavier agricultural production than they are now yielding. Lack of transport is also an important factor in retarding production. The interior areas east of the mountains, said to contain much good cotton land, are ruled out of the problem, for the present, at least, owing to lack of population and transport. The Government has taken some action in the matter of irrigation. The most recent large government project, begun early in 1924, is expected to bring water to about 124,000 acres of new land in northern Lambayeque. The work started under the direction of an American Engineer experienced in irrigation work in Peru. The project involves diverting a tributary of the Amazon river so as to flow into the Pacific coastal area. This sort of project, as well as other efforts at improving agricultural conditions, are viewed by the government as measures to increase the national revenues, in this instance, through the cotton export tax.

Peru exported 185,000 bales of 478 pounds in 1924, of which over 80 per cent went to Great Britain, but consumed domestically only about 13,000 bales, according to H. B. MacKenzie, American Commercial Attaché at Callao-Lima. The domestic trade is estimated to require manufactures to the equivalent of 31,000 bales of raw cotton, all of which the 10 existing cotton mills could supply if worked to capacity. The textile side of the Peruvian cotton industry takes a stand with regard to Manchester which is opposite to that of the producers. Manufacturers want protective tariffs of 40 per cent advalorem to exclude practically all textiles now imported, most of which come from Great Britain.

A survey of the Peruvian cotton industry appears elsewhere in this issue.

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## ARGENTINE GRAIN EXPORTS

Grain exports from Argentina in the month of December reported by Commercial Attaché Feely were as follows: Wheat, 4,630,000 bushels; corn, 14,130,000 bushels; linseed, 3,386,000 bushels; oats, 1,791,000 bushels; barley, 24,067 bushels. Argentine exports of wheat corn and linseed for the calendar year and for the last six months of 1925 are as follows, subject to revision:

ARGENTINA: Exports of wheat, corn and flaxseed, July - December, 1924 and 1925 and year ending December, 1924 and 1925.

	Year ending December 31.		6 mo., July - December.	
	1924	1925	1924	1925
	<u>1000 bu.</u>	<u>1000 bu.</u>	<u>1000 bu.</u>	<u>1000 bu.</u>
Wheat .....	109,924	113,904	14,757	31,612
Corn .....	178,215	124,711	116,246	80,983
Flaxseed .....	53,453	40,793	19,335	23,575
	:	:	:	:

## WHEAT SITUATION IN THE DANUBE BASIN

The price of wheat in Vienna has increased with the world market tendency, according to a report from G. C. Haas, American Agricultural Commissioner at Vienna. A large part of the business on the Vienna market is transit business and the Vienna price quotations are a good index of the price movement on the other markets in the Danube basin. From November 16, to December 11 Vienna wheat prices increased about 13 per cent, but the price level was still relatively low. Before the arrival of the new crop, United States wheat could be transported to Vienna and sold there on a competing basis with the wheat of the Danube basin. New York quotations in the early part of December, however, ranged about 27 cents per bushel higher than the Vienna prices.

Business continues dull, but with a more favorable immediate outlook. Market supplies of Austrian wheat are small, as the peasants are slow to sell at the low prices. The situation, however, has at present little market influence, because of the weak Austrian consumptive demand. Austrian mill stocks are small, but purchases continue to be made only to cover immediate requirements.

## WHEAT SITUATION IN THE DANUBE BASIN

The slow movement of wheat from the Danube surplus territories has greatly restricted the important transit wheat business of Vienna. There is practically no movement of wheat northward to Germany and the Czechoslovakian purchases are very limited. The wheat movement down the Danube via Braila has recently been increased by purchases of England and Italy. Vienna shared somewhat in this business, as some of these transactions were effected there. Larger market supplies are appearing in some parts of Yugoslavia. It is said that the peasants are in need of money to meet tax payments. Complaints continue to come from Hungary, concerning small market supplies. The Hungarian peasants are marketing their wheat very slowly, hoping for an improvement in the price situation. In Rumania present inland prices and export duties have held practically all of this year's wheat crop in the country. The wheat which is moving through the Rumania ports, Braila, etc., is practically all transit business in Yugoslavian, Bulgarian and Hungarian wheat.

Total wheat exports from the Danube ports and Bulgaria from August 1 to December 18 are estimated by Broomhall's at 2,840,000 bushels. While exports this year are larger than last year they are smaller than in 1922, and negligible as compared with pre-war exports.

In all probability, because of the prolonged stagnation in export, the exports of this year's crop will be considerably less than one would ordinarily expect, on the basis of the production figures. The delay in the export and the relatively low prices have without doubt increased domestic consumption considerably above average. Reports from Rumania indicate a change in consumption habits. The Rumanians have always been large consumers of corn. Now it is said that wheat consumption is increasing and that wheat bread is replacing corn bread in significant proportions. Early official Rumanian estimates of wheat export were 22,000,000 bushels and now liberal private estimates are in the neighborhood of 11,000,000 bushels and many informed members of the trade view this figure with considerable skepticism. Increasing wheat consumption tendencies also prevail in Hungary, Yugoslavia and Bulgaria, but are not so pronounced. In any case it is probable that the actual wheat export of this year's crop from the surplus Danube territories will approximate minimum rather than maximum expectations on the basis of this year's increased production.

The prospects of some revival in business in the near future seemed much better in December than in November. The domestic production of the importing countries was gradually being consumed. Mill stocks were generally low and if the world market continues to show strong rather than weak tendency, hand to mouth buying will not be so prevalent.

## WHEAT SITUATION IN THE DANUBE BASIN, CONT'D.

In Hungary in the middle of December business in wheat and flour was dull. The peasants were marketing their wheat slowly and market supplies were small. Mills have been very slow to accumulate stocks and have been avoiding future commitments. The foreign outlet has been very limited, but some shipments to Italy have recently increased this business.

In Yugoslavia trade in wheat and flour was also very small. After November 15th, in some parts of Yugoslavia there was a noticeable increase in the market receipts. The mills were purchasing only for domestic consumption and immediate requirements and were not thinking of forming stocks of any size. The very small purchases of Germany, Austria and Czechoslovakia greatly restricted the wheat export movement. The recent purchases of Italy and England, however, have increased the movement down the Danube.

In Rumania practically none of the new crop had been exported up to the middle of December. Domestic prices, export duties etc. made export prohibitive. The grain dealers in the Rumanian ports, Braila, Galatz and Konstanza, were doing some business, but practically all dealings were in Yugoslavian, Hungarian and Bulgarian wheat. Most of the wheat passing through these ports was destined for England and Italy.

In Bulgaria the recent reduction in export duties, effective October 30th, caused some increase in the wheat export, but in general the situation is similar to the situation in Yugoslavia.

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## RUSSIAN BUTTER REGAINING IMPORTANT PLACE IN WORLD MARKETS

The supply of butter contributed to the world markets from Russian dairy regions has again reached considerable proportions. Prospects appear to favor a further rapid recovery of the industry in the Soviet Republics, especially Siberia.

Exports of butter from the Union of Socialist Soviet Republics during the past season amounted to fully 50,000,000 pounds, as accounted for by the combined imports from that source into Great Britain and Germany alone by the end of November. It was not expected that the shipments would be added to very considerable after that time. The estimate, therefore, of a total exportation from present Russian territory of 55,000,000 pounds for the 1925 season, as reported recently by Mr. C. A. Koeched, Danish Agricultural Agent in Russia, appears consistent with such official trade figures as are now available.

## RUSSIAN BUTTER REGAINING IMPORTANT PLACE IN WORLD MARKETS, CONT'D.

Of the territory now included in the U. S. S. R., Siberia as in prewar years still supplied most of the export butter. Some indication of the dairy resources of Siberia, and the trend of their exploitation are indicated by the following statement of the quantity of butter transported by the Siberian railway across the Urals to western Russia. The relative importance of the Siberian supplies in the last 25 years is evident from the following comparison of the Siberian surplus with the total exports of butter from Russia, in those years for which official statistics are available.

BUTTER: Siberian shipments to or through Russia in Europe, and total exports from Russia and U.S.S.R.

	: Shipments from Siberia to Russia	: Exports from Russia	-	U. S. S. R.
	: 1000 pounds	: 1000 pounds		1000 pounds
1894	: 15	: 11,412	:	
1900	: 38,530	: 42,974	:	
1910	: 143,938	: 124,372	:	
1913		: 172,003	:	
1914	: 120,739	: 118,997	:	
1915		: 119,359	:	
1917	: 129,373		:	
1918	: 65,146		:	
1919	: 36,744		:	
1920	: 26,528		:	
1921	: 16,329		:	
1922	: 14,513		:	Nil
1923	: 24,619		:	10,978
1924	: 76,323		:	44,462
1925	: 77,161		:	55,115 a/

a/ Estimated by Soviet authorities.

Siberian shipments as published in Smor Tidende, November 6, 1925, quoting Mr. C. A. Koefoed, Danish Agricultural Agent in Russia. Russian exports since 1913 from International Institute of Agriculture, Rome: Original official sources for earlier years.

It is, of course, impossible to continue figures showing accurately the trend of exports of butter from former Russian territory. Comparisons for identical territory are not now possible, since the area within the boundaries of the former Russian Empire now gives rise to exports involving possible duplication, as those of the Baltic states, or are included with other territory as in Poland. The combined exports for the season by the end of August from the Baltic states, Estonia, Lithuania, and Latvia totalled 29,144,000 pounds according to trade figures published by the International Institute of Agriculture.

## RUSSIAN BUTTER REGAINING IMPORTANT PLACE IN WORLD MARKETS, CONT'D.

The whole of the foreign trade of the Union of Socialist Soviet Republics, according to their 1925 Commercial Year Book, is at present directed by the People's Commissariat for Foreign Trade of the U.S.S.R. The organization has its own representatives on the Council of People's Commissaries of the U.S.S.R. It is these representatives who direct the activities of the foreign trade organizations of the respective Republics. The Trade Missions and the Trade Agencies of the U.S.S.R. abroad are the agencies of the Peoples Commissariat for Foreign Trade.

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## DEMAND FOR AMERICAN COTTON IN CENTRAL EUROPE.

The cotton textile situation in the three central European states, Austria, Czechoslovakia and Hungary, presents an unsettled picture, according to a report received in the Department of Agriculture from Agricultural Commissioner, George C. Haas, at Vienna. Increased imports of raw cotton during the first three quarters of 1925, improving demand for cotton manufactures on the part of Russia, relatively high spindle activity and a few months' supply of unfilled orders combined to give a relatively favorable aspect to the industry at the middle of December. On the other hand, Mr. Haas points out that the German import tariff on finished goods, which became effective October 1st, and the generally unfavorable economic situation in Germany have reduced imports into that country during the last quarter of 1925. Commercial treaty negotiations which are pending between Germany, Czechoslovakia and Austria appear to give promise of more favorable trade arrangements which may partially remedy this situation.

On the whole, with the exception of the unfilled orders in hand the condition of the textile business was not satisfactory in December. The future direction which business will take is mainly dependent upon how the economic situation in Germany develops and the outcome of the commercial treaty negotiations between Germany, Czechoslovakia, and Austria. If the present condition continues it may be expected to result in reduced mill activity during the first months of 1926.

Czechoslovakia imported 440,000 bales (500 lbs. gross) of raw cotton and cotton waste during the first nine months of 1925, as compared with 350,000 bales for the same period in 1924. As these figures include only a small amount of cotton waste, it may be assumed that the imports of raw cotton increased about 25 per cent. Import statistics indicate a similar increase in mill consumption in Austria and Hungary. Austria's raw cotton imports for the first six months of 1925 amounted to 82,000 bales of 500 pounds, compared with 68,000 and 55,000 bales for the same months of 1924

DEMAND FOR AMERICAN COTTON IN CENTRAL EUROPE, CONT'D.

and 1923, respectively. The cotton industry in Hungary, which is relatively very small, imported 7,600 bales during the period January to July, 1925, compared with 6,100 for the same six months in 1924. American cotton constituted a slightly larger proportion, also, of the total raw cotton importations of these countries in 1925 than in 1924, probably attributable to the lower prevailing prices of American cotton.

The Spinning Industry

An unusually high spindle activity is reported by Commissioner Haas for both Czechoslovakia and Austria during the first three quarters of 1925. Czechoslovakia, with an average number of spindles amounting to 3,500,000, reported an occupation of 95 per cent. On the basis of a normal shift of 48 hours per week, the activity is estimated at 115-120 per cent as certain mills operated two shifts daily. In Austria the total number of spindles operated averaged about 1,061,000, the activity estimated on a 48 hour week basis being 100-105 per cent. In Hungary the small spinning industry reported practically 100 per cent occupation. While the Hungarian industry does not bulk large comparatively, nevertheless its rapid development may be of some significance in the future. In 1925 there were approximately 100,000 spindles as compared with about 93,000 in 1924 and 33,000 in 1921. Hungary's domestic yarn production at present covers about 38 per cent of the consumptive requirement.

Exports of unbleached cotton yarn from both Austria and Czechoslovakia showed an important increase during the first three quarters of 1925 in comparison with the same months of 1924, Germany figuring most largely in the increase. The increase in Czechoslovakia exports January to September, 1925, over the same period in 1924 was about 48 per cent and the increase of the exports to Germany amounted to 63 per cent. Germany's increased purchases were, no doubt, in part accounted for by the anxiety of German buyers to store up stocks in anticipation of the tariff of October 1. Austria's yarn exports in the first six months of 1925 were 19 per cent greater than for the same months of 1924. Germany's purchases were very largely responsible for the full activity of Austrian spinning mills during the first half of 1925, taking 40 per cent of Austrian yarn exports. Hungary's purchases from Austria were much reduced in comparison with the preceding year as a result of the Hungarian government's policy of protecting its spinning industry.

The Cotton Weaving Industry

The looms showed somewhat less activity than the spinning industry both in Czechoslovakia and in Austria during the first nine months of 1925. The activity in Czechoslovakia was estimated at about 75 per cent and in Austria at 90 per cent. The domestic production of cotton cloth in Austria covers about 60 to 70 per cent of home consumption, the balance being made up largely by imports from Czechoslovakia and Switzerland. Hungary also produces about 60 per cent of her cotton cloth requirements although the weaving industry depends upon imports for the largest part of its yarn supplies.

## PERUVIAN COTTON

In 1922, Dr. W. E. Dunn, then acting American Commercial Attaché at Callao-Lima, made a detailed study of the Peruvian cotton industry. At the same time Mr. D. S. Bullock, then American Agricultural Commissioner in South America, was compiling his report to the United States Department of Agriculture on agriculture in Peru and was granted permission to embody much of Dr. Dunn's material in that report. Dr. Dunn's study was published in 1923 by the Bureau for Foreign and Domestic Commerce as Trade Information Bulletin No. 95 under the title "The Cotton Industry of Peru." During the period elapsed since that time, however, cotton production in Peru has made substantial gains. In consideration of the progress exhibited, it has been thought advisable to reproduce parts of that report together with the latest information available. This makes the third number of Foreign Crops and Markets to be devoted to South American cotton, numbers on Paraguay and Brazil having already appeared as Nos. 16 and 25 of Vol. 10, based on reports made by Leon M. Estabrook, some time American Agricultural Commissioner in South America.

Cotton is indigenous to Peru. A native variety known as "Full Rough", has grown there since prehistoric times, as is shown by many surviving specimens of ancient Inca textiles. During the Spanish colonial régime cotton was cultivated on a limited scale only, although some efforts were made to encourage the spinning industry. After independence was achieved in 1821, Peru's production continued more or less stationary for many years. About the time of the American Civil War, new varieties were introduced but no real attempt was made at scientific cultivation. From 1900 to 1907 Peru's annual exports of cotton averaged around 36,000 bales of 473 pounds. In 1908 exports jumped to 72,000 bales and since that time there has been a steady growth in the industry.

Producing Section

Practically the entire cotton crop of Peru is grown in the irrigated valleys of the Pacific coastal zone, with the exception of insignificant quantities produced in the Department of Loreto (Iquitos region), and in a few inland districts such as Huanuco, Chanchamayo, Abancay, etc. The official statistics of the Peruvian government list some thirty-five separate producing valleys along the coast which are divided into three fairly well defined zones; In the extreme north, the valleys of the Piura and Chira Rivers in the Department of Piura; in the central coast region, from Chimbote to Ica; in the extreme south the Camana, Majes, Ocona and Tambo valleys in the Department of Arequipa, and the Moquenqua district. The second and third zones are practically continuous, but have been separated because of the far greater production of the central portion. Cotton does not thrive well north of the Santa River (near Chimbote) until the Pirua section is reached, sugar and rice being substitute crops. Each valley has its peculiar characteristics, and there is considerable variation in seasons, varieties and average yields. For this reason it is difficult to generalize concerning the Peruvian cotton crop as a whole.

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Since the commercial crop of Peru is grown by irrigation only, the immediate extension of the present acreage depends upon the providing of additional irrigation facilities along the coast. At best, such extension is limited. There are undoubtedly areas east of the Andes adapted to cotton cultivation, but population and transportation are lacking.

Varieties

Five main varieties of cotton are grown in Peru, each of which has several grades. A brief description of these varieties follows:

Full Rough (aspero) - The famous "Peruvian Full Rough", known locally as "aspero" or "algodon del pais", is the best type of the original native variety, and is produced only in the Department of Piura. It is distinguished by its very rough, wrinkly fiber, which is especially suitable for mixing with wool in the manufacture of textiles. The average length of the Full Rough fiber is 1-1/4 inches. The plant grows to a height of from ten to twelve feet and has the appearance of a small tree. Four or five crops are obtained from one planting. Although the shrub will live for fifteen years or more, the yield decreases to such an extent after the fourth or fifth year that it pays to replant. An interesting characteristic of the native variety is that it bears twice a year. The first harvest usually comes from July to September, after which the plant puts out new blossoms, and is picked again from late December or January to March.

Semi-rough (semi-aspero) - The Semi-rough variety is usually regarded as a modified form of the Full Rough, the difference being due to climatic influences and soil. There are some reasons for believing, however, that it is a distinct variety. The importance of Semi-rough has greatly decreased during the past three years, the relatively small yield causing it to be replaced by more profitable varieties. The Semi-rough fiber is less rough than the Piura variety, and averages 1 3/16 inches in length. Otherwise the general characteristics and methods of cultivation of this variety are practically the same as those of Full Rough.

"Egipto" or "Suave" - This variety was originally introduced from the United States during the Civil War period, and resembles the ordinary American Upland. The name "Egipto" (Egyptian) is said to have arisen from a confusion of labels when the first two shipments of Upland and Egyptian seed were received. Although the error was afterwards recognized, the misnomer "Egipto" still clings to this variety, although the alternative and more appropriate term "Suave" (smooth) is also used. Suave is grown to some extent in most of the valleys of the coast and still constitutes a considerable percentage of the total crop. The Chincha valley is by far the largest producer. The fiber has an average length of 1 1/16 to 1 1/8 inches. Two crops are usually obtained from one planting.

Tanguis - This important variety, which has almost revolutionized the Peruvian cotton industry, derives its name from its originator Senor Fermin Tanguis, a prominent planter of Pisco and many years ago head of the agricultural experimental station in Porto Rico. The fiber is very white and is

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a long staple averaging 1 5/16 inches, although 1 1/2 inches is found. It also possesses some of the rough quality peculiar to Peruvian cotton, being variable in this respect. In certain sections it inclines to the "roughish" side and in others it tends to be "smooth". Buyers usually inquire into this feature before offering a price. The chief advantage of Tanguis is its high yield, which is from 20 per cent to 28 per cent greater than any other variety. So popular has it become on this account that in 1922 it was estimated to constitute approximately 60 per cent of the total Peruvian crop. In the Pisco Valley Tanguis is now practically the only variety grown.

The plant reaches a height of about six feet, and is very hardy. Two or three crops are obtained from one planting, and in some cases four or five are possible with a liberal use of fertilizer (guano). The "superfine" grade of Tanguis brings the highest price of any Peruvian cotton on the market. Other grades are "Good Fair" and "Fair."

Mitafifi - Mitafifi was originally grown from Egyptian seed. It is grown in many valleys, but thrives best in Pativilca, Supe, Barranca, Chancay, Huacho and Canete. The production of the first three valleys named is almost wholly Mitafifi. The fiber is cream colored, smooth and silky, averaging 1-1/4 inches in length. Two crops are secured from one planting. This variety is especially suitable for use in the manufacture of automobile tires.

Other varieties - Small quantities of Sea Island cotton are grown in Peru, being most successful in the Supe Valley (north of Lima). This variety has also been tried in the Iquitos region, but seems to have been given up there. Sakellaridi is raised in the Huarmey and Huacho valleys in very small quantities. Huanuco cotton is merely the name given to the native variety grown in that locality. It is similar to Brazilian cotton. Cotton grows wild in some of the interior sections, and is utilized by the Indians in weaving homespun garments.

COTTON: Average yield per acre and ginning percentage in Peru,  
1915-16 to 1920-21

Year	:		Percentage of	
	Unginned Cotton :		Ginned Cotton	ginned cotton
	:		to unginned	
	Pounds per acre	:	Pounds per acre	Per cent
1915-16.....	1198.5	:	442.6	36.9
1916-17.....	1130.3	:	377.9	33.4
1917-18.....	1040.4	:	351.5	33.7
1918-19.....	999.9	:	336.9	33.6
1919-20.....	907.1	:	328.3	36.1
1920-21.....	1025.3	:	332.2	32.4

## PERUVIAN COTTON, CONT'D

COTTON: Production in Peru by varieties, 1915-16 to 1920-21

In equivalents of 478 pound bales

Variety	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
	bales	bales	bales	bales	bales	bales
Rough.....	18,638	12,256	17,208	14,178	25,178	25,574
Semi-rough.....	5,073	12,319	11,161	12,725	6,794	5,318
Egypt.....	75,966	56,466	54,442	53,533	49,672	53,828
Mitafifi.....	13,795	44,083	45,024	38,507	39,932	43,003
Tanguis.....	---	---	11,392	30,182	55,465	58,385
Not classified.....	13,836	---	13,598	5,650	---	---
Total.....	127,303	125,104	152,925	154,775	177,041	186,108

Statistical Abstract of Peru, 1923, page 93.

COTTON: Area and total production in Peru, annual  
1920-21 to 1924-25

Year	Area	Production	
		Acres	Bales of 478 pounds
1920-21.....	270,000	:	175,000
1921-22.....	233,000	:	182,000
1922-23.....	291,000	:	200,000
1923-24.....	286,000	:	203,000
1924-25.....	:	:	206,000

International Institute of Agriculture.

Climatic Conditions

Absence of rain, hail or frost - Climatic conditions in most of the coastal belt are exceptionally favorable for cotton growing. There is no rain, hail or frost to injure the growing crop, and the climate is more or less uniform throughout the year. Planters in certain sections, however, have noted in recent years that the change in temperature from day to night is more marked than formerly, a condition which is favorable to the multiplication of pests and interferes with the normal developments of the crop. Some think this phenomenon is due to a shifting of the cold Humboldt current nearer the coast. Whether the change is transitory or permanent remains to be seen. From June to December heavy mists and fogs occur along the coast, which furnish considerable moisture that damages cotton allowed to remain unpicked for any considerable length of time.

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All agriculture on the coast is carried on under irrigation. The progress of the cotton crop depends on the availability of water in the short rivers flowing from the mountains to the ocean. A few of these streams are permanent, but the majority dry up from June to November. The planting season is therefore dependent in many valleys on the flood period of the rivers which bring down the mountain rains to the coast. This period is generally from about November to April, being earlier in some valleys and later in others and often varying from year to year.

Seasons

Planting - In valleys which are watered by permanent streams, cotton is planted as a rule from September to October or November. In the Santa, Casma and Huarmey valleys some hacendados plant as early as June or July. In the Piura section the customary planting season is from January to March, when water is abundant and the largest areas can be most easily irrigated. Some planting is done in October and November, however, especially in the Chira valley, where there is always water.

In the Chincra and Ica valleys there are two planting seasons. Cotton may be planted in the flood season, from December to February, maturing in about six months, or it may be planted in May or June. In the latter case the plant barely manages to survive during the dry season until the rivers rise again in December, whereupon it is irrigated and grows up rapidly, finally bearing from April to June, almost a full year after planting.

As several crops are obtained from one planting, there is no general renewal of fields each year. Each hacienda will usually have fields in different stages of maturity, one with "plant" cotton that has not yet matured, another with second or third year cotton, and so on, making it necessary to replant only a certain portion of the land each year.

Harvesting - The Peruvian cotton picking season is not sharply defined or uniform. Picking is in progress in some localities during practically every month of the year. The bulk of the crop is harvested from April to July, although in some sections picking may begin as early as March. This statement applies chiefly to the central coast region. In the Piura section the season is later. Picking of Full Rough begins in late July or August for the "San Juan" crop after which there is a lull until January-March, when the second or "Christmas" crop is available. In the valleys where Semi-aspero is grown, there is also a second picking, from about October to December. In the extreme south the season is somewhat later than in the central coast region, Suave usually being picked from May to July, and Tanguis and Mitafifi from June to August. In the Iquitos region the main harvest comes from June to August, and there is a second picking toward the end of the year.

Methods of cultivation: use of machinery.

Methods of cotton cultivation in Peru vary according to the variety grown, the water supply, climate and soil conditions, and the means and progressiveness of the planter. On many of the larger haciendas tractors are

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used for breaking up the land, but the major portion of the work is still carried on in more or less primitive fashion. On account of the presence of irrigation ditches, agricultural machinery can be used in cultivating only to a limited extent. There are a fair number of mechanical cultivators in use. The planter is seldom used since the seed is usually planted on the side of the furrow and not in the bottom. Labor is cheap and often incompetent or unwilling to operate modern agricultural machinery.

After the land is broken up and furrows made for irrigation the water is let in and allowed to soak thoroughly into the soil. The seed is then planted on the edge of the furrow a little above water level. If placed in the bottom of the furrow the irrigating stream will wash away the seed, as a rule. Planting is usually done with a spade, a small hole or cleft being made for the seed. Peruvian laborers will not use a hoe, which is rarely seen on a plantation. From fifteen to twenty seeds are planted in one hill, so that four or five may be sure to survive. After the plants are up they are thinned out and later on a ridge of dirt is thrown up to separate the plants from the direct contact of water. The more progressive haciendas use mechanical cultivators to keep the ridges clean, but the furrow itself is usually cleaned by hand labor. In the Santa and Paticloa valleys, where labor is scarce, cotton is sometimes planted "a cola de buey." The seed is dropped in the side of the furrow, being covered by the plow.

In valleys where water is very scarce, the "barbecho" method of planting may be employed. The land is inundated and plowed as soon as sufficiently dry in order to break up the surface and prevent evaporation by capillary action. The moisture is retained for a considerable period, and planting is possible several months later. Water is afterwards used according to the necessities of the plants.

The Tanguis variety is planted in rows about 71 inches apart with about the same distance between the plants. Less space is needed for Suave and Mitafifi, approximately 47 inches being left between furrows and plants.

In the case of Full Rough, the procedure is different. That variety is planted in wide ditches from twelve to fifteen feet apart, the seed being deposited in holes on the edge of the ditch. The distance between plants may be from 12 to 15 feet, or even greater, as much room is needed for the branches of the mature shrub. Comparatively little attention is necessary after the plant is of any size. The native varieties begin to bear in about eight or nine months, but do not produce a full crop until the second year. Semi-rough is planted in a similar manner. The general utility implement is the spade.

The unique methods in vogue in the Chincha and Ica Valleys have been mentioned. Cotton is often planted in "Barbecho" in May or June or even later, alternate rows of beans and peas being sown. The vegetables mature and are gathered, often paying the expenses of cultivating the whole field, while the cotton remains in stunted form until it can be irrigated in the flood season, afterwards maturing very quickly.

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The foregoing statements apply to the plant crop (*planta*). For second or third year cotton ("doca" and "resoca") of Tanguis, Suave or Mitafifi, it is merely necessary to cut off the old plants a few inches above the ground. After irrigation the plant grows up again and bears as usual, although the yield is usually slightly less, except in the case of Tanguis. Full Rough and Semi-rough are not cut down, but bear several years with little or no further attention except irrigation. The upper branches of the native plant are pruned, however, in order to improve the yield.

The customary fertilizer in Peru is guano, obtained from the islands off the coast. From one to three tons of guano are used for each  $7 \frac{2}{5}$  acres of land depending on the nature of the soil.

Labor conditions - Cotton growing in Peru requires large capital for the best results. As a consequence, there is a constant tendency for the large estates to absorb the smaller ones. Laborers usually live on the estate, and are given a piece of land of their own to cultivate in addition to regular wages for the days they work for the owner. The average wage varied in 1922 from 62 to 82 cents per day, and rations are usually allowed as well. The labor supply is somewhat deficient on the coast, and it is the custom to contract for men from the mountains during the busier seasons. The average Peruvian agricultural laborer is a stolid individual, loath to change from the habits of his ancestors; hence it is difficult to introduce improved methods of cultivation.

Pests - Although Peru has not yet been visited by the boll weevil, the country is not entirely free from cotton pests, which are beginning to cause serious losses in various sections. It is estimated that at least 50 per cent of the 1922 crop in the Piura section was lost on account of pests. Severe damage also occurred in the Canete, Fisco and Ica valleys.

One of the most prevalent troubles is what is known as "hielo" (ice) a term which is popularly applied to almost any obscure trouble. This phenomenon was formerly thought to be due to the chilling of the plants during the night (hence the name), but is now considered by competent authorities to arise from a combination of bacteria which appear when the cotton is grown under unhealthy conditions, such as over-irrigation, lack of cultivation, extreme variation in day and night temperature, etc. The effect is to putrify the contents of the boll, either killing the plant or hardening the fiber. The exact nature of the difficulty in this case is not yet clear.

Another widespread pest is the insect which is similar to the American cotton stainer. This insect penetrates the boll and sucks the juice of the seed, which leaks out and stains the fiber. Most of the "amarillo" grade is caused by this pest.

Young plants are often attacked by what is known as the "chupadera" a combination of bacteria which make replanting necessary in many cases. The chupadera is most serious in soil that is rich in nitrogen and deficient in lime.

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The white scale (*Hemichionaspis minor*) or "piojo blanco" became serious in the Ica and Pisca valleys during 1922, causing the Government to prohibit the exportation of seed from those sections. Other forms are also prevalent in other valleys, but are not serious. Plantations in the Canete Valley have recently been ravaged by a combination of pests including various insects, spiders, and the scale. The cotton worm and the army worm are also found in Peru, but are easily exterminated with the customary remedies.

There is no well equipped experimental station in Peru for the study of cotton cultivation. The increasing seriousness of pests proves that sporadic measures of relief are not sufficient, and that an organized campaign will have to be made if they are to be exterminated. The problem is not a difficult one, according to competent agricultural experts, and there is yet no reason to be alarmed for the future of the industry in Peru, if ordinary industry and preserverance are applied.

Ginning Industry - Peruvian cotton is usually carefully sorted by hand before being put through the gin. This is necessary on account of the prevalence of stained cotton, and in the Piura district also because of the colored fiber. Each gin usually has a large patio, where the cotton is spread out to dry, and the work of sorting is done by women and children. Large bins are kept for storing the different varieties of seed cotton preliminary to ginning.

There are comparatively few public gins in Peru; the majority of the haciendas ginning their own cotton. This is due in large measure to the fact that cotton cultivation is most profitable only with large capital and on a scale sufficient to justify a private gin. Difficulties of transportation also make it necessary to gin the cotton as near as possible to the source of production. An English firm, the largest public ginners in Peru, have several gins in the Piura district, Lima, Pisco and the Tambo valley (Department of Arequipa).

According to Peruvian official statistics for 1919 (the latest available) there were then 115 separate ginning establishments in the republic. A fair estimate for 1923 was thought to be from 125 to 140. Many of these are small primitive affairs, installed in sheds or store rooms, and have a capacity of only four or five bales per day. There are a fair number of well equipped gins, however, of the latest American type, with a capacity of 100 bales daily. Many of the gins are operated by hydraulic power. Motive force is usually deficient, and in many instances the suction system has been replaced by all hand labor. The average density of a bale in Peru is only from 17 to 20 pounds per cubic foot. There are not cotton compresses in the country and it is doubtful if one would pay as the product of each valley destined for export is shipped direct to foreign ports.

Two kinds of ginning machinery are required. The saw gin of the usual American type is used for the Full Rough, Suave, and Tanguis varieties. The roller gin, made by a British firm, is used for Mitaifi. This machinery is slow, but the lint comes out very clean. Some half-dozen well known American makes of gins are in successful operation in Peru.

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The weight of bales varies greatly according to the location and transportation facilities of the gin. Where there is easy access to a railroad or steamer, bales of from 430 to 500 pounds are found. Where burros must be depended on for transport, bales may weigh 90 to 250 pounds. Between the limits given, bales of every conceivable size are turned out. A heavy wire is used for baling instead of the steel strapping customary in the United States, and each bale is entirely covered by 8-oz. burlap, which keeps the lint clean. No ginning statistics are kept by the Peruvian Government and it is impossible to know what stocks are on hand at a given place or time.

Production Costs.

The costs of cotton production in Peru will obviously vary widely according to the special conditions of each plantation. Such costs are usually estimated at so many soles per quintal of ginned cotton. Stated in these terms, the average cost of production in 1922 varied from \$70.00 to \$80.00 per bale of 500 pounds. These figures would include the rental value of land and all expenses of cultivation. As a 500 pound bale of cotton was worth from \$140.00 to \$160.00 in 1922, the profit was approximately 100 per cent. Good cotton land was worth from \$150 to \$300 per acre.

Markets

Domestic - The local market is limited to the consumption of the new Peruvian mills, which amounts to about 13,000 bales per annum, or approximately ten per cent of the total crop. These mills buy their requirements for the entire year from about June to September, Suave being the variety most in demand. The local market is most active from April to September, with the exception of the Pirua district where the season runs from about August to March.

Connections between buyers and producers in Peru have been so long established that it is difficult for new firms to enter the market. The amount of cotton available is relatively small, and there is keen competition among the buyers. Personal relations play an important part in the business, and the "habilitacion" system often makes it necessary for the producer to sell to a given firm only.

The cotton textile industry in its modern form dates back to 1847, when the first factory was established in Lima. There are now 10 factories in the republic making cotton cloth exclusively, in addition to two woolen factories which consume considerable quantities of raw cotton.

Peruvian cotton mills make only the cheaper grades of cloth, such as "tocuyos", overall cloth, etc. The total production in 1918 was officially placed at 34,000,000 meters and was still estimated at that figure in November, 1925, although the total capacity is put at 50,000,000 meters. Some knitted goods are also turned out. There is a high protective tariff on foreign textiles, which millowners want to increase, but in spite of such protection a fair market is found for these products. The machinery in use is chiefly British and Italian. According to the "Annual Cotton Book",

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Peruvian mills in 1922 had 2,300 looms and 68,000 spindles. Peruvian official figures for 1918 show 3,049 looms and 81,000 spindles. Local companies are reticent about giving out exact figures regarding their equipment.

Foreign: Approximately 90 per cent of the Peruvian crop is exported. Great Britain has long been the chief market, but increasing quantities of Peruvian cotton went to the United States during the years 1919 to 1923. The product of each valley is shipped from its own special port. Much cotton is shipped to Great Britain on consignment, as the British buyer usually wants to examine the cotton before acceptance. While the local market is governed by New York and Liverpool quotations, the lack of accurate daily cabled advices often prevents the producer from receiving the full benefit of foreign market conditions. A large portion of the Peruvian crop is sold during June and July, when prices are likely to be lower than later in the season. There is no cotton exchange in Peru, although attempts have been made to establish one. The National Agricultural Society receives daily cabled quotations from New York and Liverpool, but this information cannot be utilized to the best advantage outside of Lima.

COTTON: Exports from Peru by countries, 1909-1924  
(Bales of 473 pounds)

Year ending Dec. 31	United	United	Other	Total
	Kingdom	States	countries	
	Bales	Bales	Bales	
Average 1909-13	65,000	10,400	11,700	87,100
1909	74,500	9,900	14,100	98,500
1910	39,200	10,200	15,700	65,100
1911	45,900	10,600	16,800	73,300
1912	73,900	8,000	6,600	88,700
1913	92,000	13,500	4,200	110,300
1914	91,100	9,800	4,700	105,600
1915	85,000	11,200	1,200	97,400
1916	96,800	14,100	.800	111,700
1917	57,300	20,600	2,200	80,100
1918	90,100	3,700	400	99,200
1919	112,800	65,200	5,200	183,200
1920	135,300	23,500	1,600	160,400
1921	142,200	24,200	1,600	168,000
1922	157,800	22,400	4,100	184,300
1923	164,000	29,600	2,600	196,200
1924 a/				185,500

Compiled from Estadistica del Comercio Especial del Peru, 1909-1924.

a/ Figures by countries not available for 1924

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The cotton export business is largely controlled by the large importing and exporting houses of Lima, which maintain branches or agents in the important producing sections. Many of the mercantile firms in the provincial towns of the coast also deal in cotton. In addition, there are three permanent agencies in Lima of American cotton buying firms, with agents in various sections. The bulk of the crop is handled by some twelve to fifteen firms, including several British, German and American concerns. These firms buy direct from the producer, each of them usually having their special clientele, with whom they have dealt for many years. A considerable part of the crop is handled on the "habilitacion" system, the firm financing the planter and contracting for his crop in advance. This system, however, is less prevalent than formerly. The hacendado rarely exports for his own account, preferring to sell outright to a local firm.

Peruvian cotton is usually sold in the local market as placed on the beach at a given port ready for shipment. The planter is paid in Peruvian money, and any profit or loss in exchange is for the account of the exporter.

It was expected that the placing of cotton on the free list under the American tariff of 1922 would open up a still larger market in the United States for Full Rough, Semi-rough, Tanguis and Mitafifi, which do not compete with the Upland variety. Germany formerly took considerable quantities of Peruvian cotton, but has not yet resumed its purchases to any considerable extent. Only insignificant quantities have been shipped to France and Japan.

Cotton Seed - This product constitutes an important item of export. Up to 1919, Chile was Peru's best market, but a heavy export tax has been levied by Peru on shipments to that country in retaliation for increased duties placed on Peruvian cotton seed oil products by Chile.

COTTONSEED: Exports from Peru, by countries, 1917-1924

Year :	:	:	:	:	:	
ending:	United	: Chile	: United	: Other	: Total	
Dec. 31: Kingdom	:	:	States	countries	:	
	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	
	: Pounds	: Pounds	: Pounds	: Pounds	: Pounds	
1917	: 10,648	: 14,852	: 475	: 4	: 25,059	
1918	: 0	: 22,271	: 203	: 3	: 22,477	
1919	: 33,703	: 37,322	: 0	: 27	: 71,052	
1920	: 17,536	: 9,817	: 195	: 47	: 27,595	
1921	: 65,084	: 5,701	: 22	: 226	: 71,013	
1922	: 32,297	: 6,226	: 0	: 226	: 38,749	
1923	: 17,634	: 916	: 0	: 2	: 18,552	
1924 a/	:	:	:	:	: 42,508	
	:	:	:	:	:	

Compiled from Estadistica del Comercio del Peru.

a/ Figures by countries not available for 1924.

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Cottonseed Oil Factories - The cottonseed oil industry is still in its infancy in Peru. There were about thirty factories in the country in 1922, the chief center being Lima, Huacho, Paita, Sullana, Canete, Pisco, Ica and Cañana. There were four refineries in Lima, and several of the provincial factories had refining plants. Cottonseed oil and oil cake are made, with soap as a by-product. Both American and British machinery is in use. Several factories have contracted for the services of American experts, and a determined effort is being made to improve methods of manufacture.

The two principal products of the factories are the cottonseed oil and the oil cake. The exports of these two products are shown by countries in the two tables which follow:

COTTONSEED OIL: Exports from Peru, by countries, 1917-1924

Year ending Dec. 31:	Chile	United Kingdom	Panama	United States	Other countries	Total
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
1917	4,649	0	0	0	93	4,742
1918	3,262	0	12	558	167	3,999
1919	3,556	76	27	0	102	3,761
1920	3,346	a/	0	0	63	3,414
1921	2,839	1,135	9	0	141	4,174
1922	1,697	2,571	950	a/	164	5,382
1923	170	2,779	1,807	24	463	5,243
1924 b/	:	:	:	:	:	10,083

Compiled from Estadistica del Comercio Especial del Peru.

a/ Less than 500 pounds.

b/ Figures by countries not available for 1924.

COTTONSEED OIL CAKE: Exports from Peru, by countries, 1917-1924

Year ending Dec. 31:	United Kingdom	United States	Denmark	Chile	Germany	Other countries	Total
	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons
1917	2,100	4,900	0	0	0	0	7,000
1918	0	4,500	0	200	0	0	4,700
1919	8,700	4,000	0	a/	0	0	12,700
1920	5,400	5,600	0	400	0	0	11,400
1921	13,200	100	0	400	a/	0	13,700
1922	15,500	0	1,500	a/	1,400	100	18,500
1923	16,900	0	0	0	700	a/	17,600
1924 b/	:	:	:	:	:	:	24,300

Compiled from Estadistica del Comercio Especial del Peru.

a/ Less than 50 tons. b/ Figures by countries for 1924 not available.

## PEPUVIAN COTTON, CONT'D.

Export Taxes - Export taxes on cotton constitute an important source of revenue for the Peruvian Government. The tax is based on the current market price of the different varieties in English money, and is fixed each week by the Ministry of Finance. This tax is determined as follows:

Mitafifi and Suave pay 21.8 cents per 100 pounds when the market price is 20 cents per pound, f.o.b. port of embarkation, the rate increasing 10 per cent of the gross value on quotations in excess of that figure. Tanguis is also taxed on this basis. The tax was formerly based on the market price of the "superfine" grade of this variety, but as a result of general protest against this practice, a decree was issued on May 24, 1922, which makes the price of the "good fair" grade the basis.

All cotton produced in the valleys of the Department of Piura pays an export tax of 11.6 cents per 100 pounds when the price is 24 cents per pound, and 10 per cent additional for higher quotations. This applies to Full Rough, Suave, Mitafifi and Tanguis alike, as well as to the colored varieties.

Cotton in the Majes and Camana valleys of southern Peru is taxed on the basis of 10 cents per 100 pounds when the price is 20 cents per pound, and 10 per cent for higher quotations. All cotton produced in the "montana" region of Peru may be exported free of duty.

Semi-rough cotton of Ica is taxed 10.09 cents per 100 pounds when the price is 22 cents per pound. When the quotation exceeds this figure 10 per cent additional of the highest gross value attained is levied. At several ports, local taxes are levied in addition to the national taxes.

FRANCE: Quantity of Wool Passing Through Test Houses at  
Roubaix - Tourcoing, 1913. 1921-1925 a/

Date	:	Quantity	:	Date	:	Quantity
	:	Pounds	:		:	Pounds
Monthly	:		:	Monthly	:	
average	:		:	1925	:	
1913.....	:	17,187,000	:	January.....	:	12,786,305
1921.....	:	8,605,000	:	February.....	:	11,979,768
1922.....	:	16,894,000	:	March.....	:	15,261,540
1923.....	:	17,688,000	:	April.....	:	12,347,275
1924.....	:	16,715,000	:	May.....	:	11,281,000
1925 b/ .....	:	15,281,000	:	June.....	:	16,078,933
	:		:	July.....	:	16,004,265
	:		:	August.....	:	17,610,664
	:		:	September.....	:	17,760,355
	:		:	October.....	:	21,696,712

Consul P. C. Squirc, Lille, France.

a/ Large wool carding center. b/ Ten months.

## CANADA: Cold storage Holdings, on December 1.

	: Five year average on December 1	:	Dec. 1, 1924	:	Dec. 1, 1925
	: Pounds	:	Pounds	:	Pounds
PORK	:	:	:	:	
Fresh frozen.....	4,368,424	:	7,715,852	:	2,855,703
Fresh not frozen.....	3,368,496	:	4,092,046	:	2,883,804
Cured dry salted.....	2,142,723	:	2,793,995	:	1,121,467
Cured sweet pickled...	7,278,851	:	7,372,671	:	6,226,949
In process of cure....	<u>9,422,525</u>	:	<u>9,157,068</u>	:	<u>7,595,485</u>
Total pork.....	26,581,019	:	31,131,632	:	20,683,408
BEEF	:	:	:	:	
Fresh frozen.....	19,377,622	:	22,082,019	:	12,949,275
Fresh not frozen.....	6,940,816	:	6,697,382	:	6,033,594
Cured.....	246,910	:	273,287	:	267,381
In process of cure....	<u>168,076</u>	:	<u>177,894</u>	:	<u>151,652</u>
Total beef.....	26,733,424	:	29,230,582	:	19,401,902
VEAL	:	:	:	:	
Fresh frozen.....		:	2,613,733	:	2,008,200
Fresh not frozen.....		:	378,648	:	291,588
Total.....		:	2,992,381	:	2,299,788
MUTTON & LAMB	:	:	:	:	
Frozen.....	5,967,611	:	5,818,247	:	3,674,803
Not frozen.....	<u>367,386</u>	:	<u>263,083</u>	:	<u>549,669</u>
Total.....	6,334,997	:	6,081,330	:	4,224,372

Cold Storage Holdings in Canada December 1, 1925. Published December 21, 1925.

GRAINS: Exports from the United States, July 1-Jan. 2, 1925- and 1926

PORK: Exports from the United States, July 1-Jan. 2, 1925 and 1926

Commodity	July 1 -	July 1 -				Week ending
	Jan. 3	Jan. 2	Dec. 12	Dec. 19	Dec. 26	Jan. 2
GRAINS:	1925	1926 a/	1925	1925	1925	1926
	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000
	: bushels	: bushels	: bushels	: bushels	: bushels	: bushels
Wheat.....	146,197	34,988 b/	568 b/	340 b/	507 b/	499
Wheat flour.....	c/ 37,446 c/	23,256	--	--	--	--
Rye.....	27,374	6,095	36	29	17	0
Corn.....	3,315	7,365	342	396	937	568
Oats.....	3,860	21,847	303	302	34	195
Barley.....	14,514	21,827	111	171	157	35
	:	:	:	:	:	:
	July 1 -	July 1 -				
	Jan. 3	Jan. 2				
	1925	1926 a/				
PORK:	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000
	: pounds	: pounds	: pounds	: pounds	: pounds	: pounds
Hams and shoulders, inc.:						
Wiltshire sides....	137,266	93,599	819	2,683	1,525	1,000
Bacon, including						
Cumberland sides....	133,738	105,012	5,353	6,150	4,423	4,931
Lard.....	434,869	300,363	10,797	9,565	13,597	15,556
Pickled pork.....	13,730	13,028	361	287	240	202
	:	:	:	:	:	:

Compiled from official records of the Bureau of Foreign and Domestic Commerce.

a/ Revised to November 30, including exports from all ports.

b/ Including wheat flour via Pacific ports.

c/ In terms of bushels of wheat.

TOBACCO (UNMANUFACTURED): Exports from Canada, 1923-1925, and six months,  
April 1-September 30, 1925

Country to which exported			Year ending March 31 -		April-Sept. 1925
	1923	1924	1925	1925	
	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000
	: pounds	: pounds	: pounds	: pounds	: pounds
United Kingdom.....	392	1,164	2,219	1,125	
United States.....	10	14	11	2	
Belgium.....	176	172	127	80	
Denmark.....	---	318	326	18	
Germany.....	---	324	795	a/	
Italy.....	---	59	---	0	
Other countries.....	22	4	53	a/	
	:	:	:	:	
Total.....	1,100	2,055	3,531	1,225	

Compiled from Monthly Report of the Trade of Canada, March, 1925 and Sept., 1925.

a/ Less than 500 pounds.

Prices of American Apples in British Markets, Wednesday, January 6, 1926  
and Wednesday, December 16, 1925, and week ending January 10, 1925.

Variety and Grade	Origin	Market	Price		
			Wednesday	Wednesday	Wk. ending
			Jan. 6, 1926	Dec. 16, 1925	Jan. 10, 1925
			Per barrel	Per barrel	Per barrel
York, A-2 1/2.....	Virginia	Liverpool	7.52 - 8.00	---	a/7.91 - 8.39
A-2 1/4.....	"	"	6.91 - 7.40	7.52 - 8.24	..
B-2 1/2.....	"	"	5.82 - 6.18	---	..
B-2 1/4.....	"	"	---	5.58 - 6.55	..
B-2 1/4.....	"	"	---	(S)4.85 - 5.82	..
Yellow Newtown, A-2 1/4:	"	"	7.40 - 7.88	7.47 - 9.58	..
Baldwin, A-2 1/2.....	Maine	"	---	(S)5.21 - 5.33	a/7.19 - 7.91
A-2 1/4.....	New York	"	(F)4.37 - 4.85	---	..
A-2 1/4.....	" "	"	(S)3.64 - 4.24	---	..
A-2 1/4.....	Maine	"	(F)5.58 - 5.82	5.33 - 6.55	..
Ungraded-2 in :	"	"	---	(I)3.33 - 3.70	..
Rhode Island Greening, :			:	:	..
A-2 1/4.....	New York	"	6.79 - 7.52	---	..
Ben Davis, A-2 1/4.....	Maine	"	(F)5.34 - 5.82	---	..
A-2 1/4.....	New York	"	---	4.35 - 5.33	..
B-2 1/4.....	Maine	"	(F)4.67 -	---	..
Ungraded-2 in : New York	"	"	---	(S)3.15 - 3.52	..
" " " : Maine	"	"	---	(F)2.35 - 3.70	..
Winesap, :			:	:	..
Ungraded- 2 in: Virginia	"	"	---	(F)5.33 - 7.40	..
Jonathan, :			:	:	..
Extra Fancy, 163/175: Wash.	"	"	2.91 - 3.15	3.03 - 3.58	..
Fancy, 163/175.....	"	"	2.67 - 2.91	2.91 - 3.15	..
Winesap, :			:	:	..
Extra Fancy, 163/175: "	"	"	2.79	3.39	..
" " 188/smaller...:	"	"	2.06 - 2.67	---	..
Fancy, 163/175.....	"	"	2.61 - 2.67	3.15	..
" 188/smaller.....:	"	"	2.18 - 2.43	---	..
Rome Beauty, :			:	:	..
Extra Fancy, 163/175: "	"	"	2.91	3.03 - 3.09	a/3.12 - 3.35
Fancy, 163/175.....:	"	"	2.67	2.73	..
Spitzenburg, :			:	:	..
Extra Fancy, 163/175: Oregon	"	"	(F)2.79 - 2.91	2.85 - 2.91	a/3.12 - 3.59
" "188/smaller...:	"	"	(F)2.30 - 2.61	2.06 - 2.79	..
Fancy, 163/175.....:	"	"	(F)2.61 - 2.67	2.67	..
" 188/smaller.....:	"	"	(F)1.94 - 2.30	2.30 - 2.55	..
Yellow Newtown, :			:	:	..
Extra Fancy, 163/175: "	"	"	3.64 - 3.76	4.00	a/3.59 - 4.07
" " 188/smaller..:	"	"	---	3.03 - 3.76	..
Fancy, 163/175.....:	"	"	3.40 - 3.76	4.00	..
" 188/smaller....:	"	"	---	2.79 - 3.83	..
C-Grade, 163/175....:	"	"	3.09 - 3.15	---	..
Ortley, Ex.Fancy, 163/175	"	"	3.64	---	..
Fancy, 188/smaller...:	"	"	3.15	---	..

a/ All grades and condition. (F) Fair condition. (I) Inferior condition.

(P) Poor condition. (S) Slack.

BUTTER: Prices in London, Berlin, Copenhagen and New York  
(By Weekly Cable)

Market and Item	December 31, 1925	January 8, 1926	January 8, 1925
New York, 92 score a/ .....	48.50	45.38	41.25
Copenhagen, official quotation :	36.34	34.41	41.25
Berlin, la. quality a/ .....	.33.46	31.30	b/
London:			
Danish .....	38.69	37.25	43.56
Dutch, unsalted .....	38.49	38.55	---
New Zealand .....	37.40	37.04	35.47
New Zealand, unsalted.....	37.84	37.47	36.64
Australian .....	35.45	34.65	34.51
Australian, unsalted.....	35.45	35.09	35.36
Argentine, unsalted.....	29.58 - 32.62	31.18 - 32.48	30.67 - 34.08
Siberian.....	30.45 - 31.75	29.45 - 31.40	---

Quotations converted at exchange of the day. a/ Thursday price. b/ Not received at that time.

EUROPEAN LIVESTOCK AND MEAT MARKETS  
(By Weekly Cable)

Market and Item	Unit	Week ending		
		December 30, 1925	January 6, 1926	January 7, 1925
<u>GERMANY:</u>				
Receipts of hogs, 14 markets....	Number	27,765	48,252	52,132
Prices of hogs, Berlin .....	\$ per 100 lbs.	18.37	18.37	15.13
Prices of lard, tcs., Hamburg....	"	17.45	17.48	18.67
<u>UNITED KINGDOM AND IRELAND:</u>				
Hogs, certain markets, England	Number	6,406	11,781	:
Hogs, purchases, Ireland .....	"	5,988	:	:
Prices at Liverpool:				
American Wiltshires .....	\$ per 100 lbs.	24.46	24.04	:
Canadian "	"	25.76	25.12	:
Danish "	"	28.36	27.93	:
Imports, Great Britain: a/				
Mutton, frozen .....	Carcasses	110,366	:	:
Lamb, "	"	220,153	:	:
Beef, "	Quarters	50,231	:	:
Beef, chilled .....	"	165,537	:	:
<u>DENMARK:</u>				
Exports, of bacon a/ c/ .....	1000 lbs.	:	:	:

a/ Received through the Department of Commerce.

c/ Week ending Tuesday preceding date indicated.

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